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EDUCATIONAL NEWS AND EDITORIAL COMMENT

New York State Educational Building

On October 17 New York state dedicated in Albany a building which is to be devoted to the business of the State Department of Education. The first floor is given over to administrative offices. On the floor above is a vaulted corridor leading to a reference reading-room. There are libraries of medicine, law, and legislation, and there is a periodical room connected with these libraries.

The building has already cost five and a half millions of dollars. It is a monument to the most highly centralized and fully developed educational department in any state in the Union.

The ceremonies of dedication were preceded by an elaborate educational program. On Tuesday the first part of the program was devoted to the discussion of problems relating to libraries and museums. In the afternoon elementary and secondary education were the topics. On Wednesday educational extension and private schools were taken up in the forenoon, and universities and professional schools were discussed in the afternoon.

The program indicates the range of interest which is served by the Department of Education of New York state. More than any other state department, this deals with the whole range of public education. The material expression of New York's interest in education, in this building, will undoubtedly draw the attention of other states to the importance of organizing in a more complete way their educational work. A central office which is not relegated to some remote corner of the state house, but is a place to which all of the school and college officers of the state may go for con-

ferences and for material which will help them in their work, is certainly an indication of the type of attitude which must be taken toward education.

The federal government might with propriety be called upon to take note of the wisdom of following the example of New York state in this matter.

Department of Superintendence

A preliminary announcement is made of the session of the Department of Superintendence. The Department will meet in Philadelphia on February 25. The meeting will continue during the remainder of the week. This date is set at a time which will make it possible for the members of the department to go on to Washington and attend the inauguration ceremonies.

A number of affiliated organizations will meet with the department. Among these are the National Society for the Scientific Study of Education, the College Teachers of Education, the National Association of School Accounting Officers, the Kindergarten Section of the National Association, and the Department of Higher Education. Announcement is also made that the National Council of Education will meet at this time.

The session on Tuesday, February 25, will be given to the National Council. On Wednesday there will be a forenoon meeting occupied by the preliminary exercises, including addresses of welcome. These will be followed by a discussion of "Team Play between Schoolmaster and Layman," by Mr. Prosser, and "Team Play between City Superintendent and City," by Mr. Cary. In the afternoon there will be a discussion of uniform standardization in school administration, curriculum, etc. The members of the program who have already consented to take part are Mr. Draper and Mr. McMurry. In the evening there will be a paper on the "Development of Professional Spirit and Initiative of Teachers," by Mr. Judd, and a paper on "Rhythm in Education," by Mr. Joseph Lee. In all probability the Commissioner of Education of the United States will also appear at this time.

The Thursday forenoon program will be devoted to a discussion of "The Outcome of a Few Experiments in Developing a School System." A number of practical men are to appear in this dis-

cussion: Superintendent Meek, Superintendent Condon, Superintendent Francis, and others.

The business meeting of the department will be held at 11 o'clock on Thursday. In the afternoon there will be round tables and departmental meetings. There will be a round table for superintendents of large cities, conducted by Superintendent Edson; a round table for state and county superintendents conducted under the presidency of Mr. Blair of Illinois. The round table for superintendents of small cities will be conducted by Mr. Gruff, of Omaha.

In the evening Mr. Schaeffer will deliver an address on "Limitations of Examinations," and David Starr Jordan will speak on "Ideals."

Friday forenoon will be used for the reports of committees. The committee which was appointed to investigate the cost of living and the salaries of teachers will make a report, and the committee which is to discuss Economy of Time in the Elementary School will also make a report.

In the afternoon the subject will be the "Testing of Efficiency of School Administration." Messrs. Hanus, Bailey, and Spaulding, and others will appear on this program.

Research Aids Offered by Bureau of Education

The Bureau of Education of the United States has never been more active than it is at the present time in distributing educational information to students and school officers throughout the United States. A recent note from the Bureau calls attention to the fact that the Bureau is now prepared to accommodate commissions and committees appointed by state boards of education and by local associations for the purpose of investigating particular phases of education. Committees and commissions will be provided with a place to work and will, so far as possible, be aided in pursuing investigations through the library of the Bureau. Further than this, the Bureau is prepared to co-operate with such committees and commissions in collecting information from all parts of the country. The department has the advantage of being able to frank its communications, and can in this way collect information which would be very expensive if it were brought together by a separate commission.

Furthermore, the Bureau is prepared to supply documents from its library to individuals who are at work at home. These individuals can borrow, through institutional or public libraries, the works which the Bureau has carefully collected, including a large number of textbooks. For example, anyone who is about to prepare a textbook on any subject can thus secure the benefit of the example of many other books which have gone before in that particular field.

A monthly bulletin is issued by the Bureau, giving a full record of current educational publications. This bulletin should be in the hands of every school official. The articles and books which come out during the month are referred to, and in many cases epitomized in such a way that the student can find through these references whether the book is one that he should secure for his own personal use.

Comments on Equal Pay in New York

Comment is made in two newspapers on the experience of New York City which results from the passing of the equal-pay law. The *Detroit Free Press* of October 24 writes as follows: "Application of the principle of equal pay for men and women has had the inevitable result in New York City. It has practically driven men out of the field. The school authorities find themselves unable to increase the pay of the women to the amount that had been received by the men, and the only thing they can do is to reduce the salaries of the men. The latter cannot support themselves and their families on the lessened stipend, which is quite adequate for the maintenance of a single woman. The result may bring a little selfish gratification to women teachers, for in the readjustment they have gained somewhat at the expense of their male associates, but it means grievous loss to the school system."

The editorial continues to comment on the impossibility of maintaining the teaching staff as it was constituted before this legislation was passed.

The *Boston Transcript* referring to the same matter, writes as follows: "New York City is now reaping the full fruits of the equal-pay policy that a yielding legislature and school board put into

effect in the public schools. Feminization, the evils of which have so often been pointed out, is virtually a fact, and it will probably be many many years before any movement in the opposite direction is instituted. In the list of teachers now eligible for appointment there are the names of six hundred and eighty-eight women, and of not a single man, and this situation is not an accident. It is the result of the operation of inflexible economic laws. Everyone connected with the vicious equal-pay proposition, which raises women's salaries by reducing those of men, was warned long in advance of the certain results."

These two quotations are cited not for the purpose of advocating or answering the conclusions which are there set forth. They are quoted because they represent very definitely the reaction of two leading newspapers upon the situation which has arisen in New York City. It may and it may not be advantageous for the number of women to increase in the schools. Many superintendents would be perfectly clear that it is better to have a well qualified woman than a badly qualified man, and they may be prepared to support, as a legitimate matter of school policy, the maintenance of a faculty made up primarily of strong women who can receive an adequate salary, rather than of a mixture of men and women, both of whom receive inadequate pay. But the fact is that the people who support the schools are interested in the outcome of such legislation as that which was carried through in New York City, and the attitude of other communities will be based upon the experience of New York City, and upon the comments which are reported in the public press.

Normal Extension

An experiment in normal extension work is being tried by the State Normal School at Macomb, Ill. There go out from this normal school instructors who conduct in the neighboring cities and towns extension courses for teachers. The work of the normal school is in this way brought to the teachers who are in the field and who are not able to suspend their regular duties for the purpose of study at the institution itself. Bulletins are issued in which outline courses are presented; these outlines are used in connection with certain textbooks which

are to be read by the students, and lectures which are given by members of the normal-school staff. The teachers in the neighboring towns are able through such courses to secure certificates and credentials from the normal school which they were not able to secure as students before entering upon their professional work.

The effort of public institutions to spread their influence through the organization of extension work is exhibited in many of the higher institutions, especially in the state universities in the Middle West. There is certainly no reason why the normal school should not serve its territory in the same way, and the discovery of this method of enlarging the range of influence of the normal school is an important addition to normal-school organization.

Material for Bird-Study

The National Association of Audubon Societies calls attention to the fact that it has a considerable sum of money to expend in distributing literature and pictures which shall promote the study of birds in the public schools. The association is prepared to send the magazine *Bird Lore*, the usual cost of which is one dollar, to any teacher who will make application and show that she is able to make use of this publication for work in the school. Other material, such as pictures to be used in connection with the work of the school, will also be supplied on application.

Anyone desiring further information about this offer is recommended to write to Mr. T. Gilbert Pearson, secretary of the association, at 1974 Broadway, New York City.

Public Health

The Bureau of Education sends the following news item: "The state of Minnesota has engaged Dr. Ernest B. Hoag, a health expert, to travel about the state and demonstrate to the citizens that rational conservation of the mental and physical health of children is possible and practicable with the means already at hand. Three plans are proposed: (1) organization with a medical officer and a nurse or nurses; (2) organization with a school nurse or nurses only; (3) organization by the employment of a simple non-medical health-survey on the part of the teacher only. To make it possible for every com-

munity, however small, to possess the necessary technical knowledge, the State Board of Health will maintain at the state capital a "clearing-house of information concerning child hygiene, medical supervision, the teaching of school hygiene, and the like."

This action on the part of the state of Minnesota is a clear indication that the public is coming to recognize that the prevention of disease is more economical than the cure of disease. The whole matter of public health is a matter of education and public organization.

Vocational Guidance

A conference was held in New York City on October 23 to 26, dealing with the general problem of vocational guidance. There was an exhibit of material on vocational guidance in the New York Public Library, and addresses were made by numerous workers who are interested in developing a better system of vocational guidance in the public schools.

The arguments in favor of vocational guidance are sufficiently familiar, so that we need not at this time report that phase of the discussion. A suggestion which ought to stimulate study was made by one of the speakers who pointed out that no teacher in New York City, or anywhere else, has the right to attempt to guide a child in the choice of his life-work, since there is no adequate knowledge of the relation between certain specialized forms of capacity, and the demands for certain trades. This fact that we do not know now how to direct children should be the strongest possible stimulus toward investigation of this problem. It ought to be possible to discover, in the first place, by an examination of the various trades, what qualities are needed, and in the second place it ought to be possible to discover which children in the school have those qualities that will best prepare them for special lines of work. This kind of an investigation offers an inviting field to the scientifically trained student of education who is also engaged in giving instruction in the schools. This is one of the problems which is not a problem of subject-matter at all, but must be recognized by teachers as a legitimate field for the exercise of the best possible scientific training.

Employment Bureaus in Schools

Professor John R. Commons, a member of the Wisconsin Industrial Commission, proposes that the school-houses shall be used as vocational bureaus; that boys and girls on the one hand, and adults on the other, shall find here an opportunity to register for employment. Giving Mr. Commons' own statement of the case, it may be said: "There is need of an organized market for labor. If each public schoolhouse had a director of its social-center service, he would be supplied with blanks from the main employment office. A workman, by going to the school nearest his house of residence, could immediately be connected with the whole organized labor market of the state."

This suggestion for the extension of social-center work and the development of the vocational-guidance work through the school, is justified by the experience of teachers who know that without formal organization of the movement schools now serve as centers where employers often find those who fill the places which they have vacant.

Moving Pictures

Two news items call attention to the probable importance in the future of moving pictures in the city schools. The Brooklyn Teachers' Association held an exhibit to test the success of moving pictures, and many of the members of the association came to the conclusion that these pictures could be used with very great advantage in the ordinary work of the school. Much science material and much geographical material certainly can be presented in this way better than in any other way. The Bureau of Education also calls attention to the fact that the use of moving pictures in education has had a real impetus in German official circles. The Prussian minister of education is considering the feasibility of employing moving pictures in certain courses in higher educational institutions, and a number of film manufacturers are being given an opportunity to show the authorities what films they have that can be adapted to educational purposes.

The use of the moving picture in schools has become common in the schools of Gary, and has frequently been commented upon

as an important part of the work in those schools. One of the principals in a school in Paterson, N.J., gives an account of competition in kind which he felt called upon to carry on against the moving-picture show which established itself immediately across the street from the school building.

All these cases go to show the importance not only of acquiring new methods of presenting interesting material to children in the schools, but also the importance of preparing children to appreciate proper kinds of recreation material.

Free Textbooks

The issue of whether or not free textbooks shall be supplied to the children of the Indiana schools was one of the important matters discussed in the recent campaign. Senator Beveridge advocated the giving of free textbooks to all the children in the public schools of Indiana. It was replied that this would increase the tax levy upon the state to such an extent that it would jeopardize the school work. It was replied again in answer to this objection that the distribution of expense for the conduct of public schools is a legitimate charge upon all the people in the state, whether or not they send children to the schools, and that the cost of textbooks is a part of this necessary public expense.

In the state of California the matter was a subject of vigorous discussion in terms of a constitutional amendment which was proposed in that state. It was argued there that the chief objection to the use of public textbooks is to be found in the fact that disease is spread by passing books around from family to family. It was also argued that better textbooks can be made by independent book companies in competition with each other than can be manufactured by the state department.

In the city of Cleveland the same general question has come up in a somewhat different form. The discussion in Cleveland, however, was not carried on so much with regard to the merits of the case for and against free textbooks, as in terms of a very heated political discussion which has followed the reorganization of the school system. In that controversy one of the labor unions took a hand because of its interest in the methods of manufacturing textbooks.

These various indications show the keen interest of the public in the matter of textbooks, and raise several questions which sooner or later will have to be met in all of the different states. The disadvantages of public textbooks, and the advantages, on the other hand, of supplying everybody with textbooks free of cost to the individual family, certainly must be regarded as a part of the problem of public education.

Rural Schools of Wisconsin

The Training School for Public Service has prepared a report on the conditions and needs of the rural schools of Wisconsin. This report opens with a brief general statement of the factors which make for progress in rural schools. Following upon this statement is a careful analysis of a number of cases of school expenditures throughout the various districts of the state. These studies of the actual practices of the small rural school boards indicate that there is a large amount of petty graft and irregularity in the work of these school boards. Accounts are evidently kept very loosely in many districts, and charges are made which do not seem to be justified when one studies the actual needs of the schools.

Later in the report matters of instruction and supervision are taken up in detail. Facts are brought out which are of importance not only to Wisconsin, but to students of rural education in all parts of the country. For example, it is shown that out of 128 teachers visited and reported on, 56 had taught in their present schools less than one year, 39 had taught one year, 20 had taught two years, 9 had taught 3 years, and only 4 had taught for four years or more. This shows that the rural school certainly has in the districts canvassed no continuity of purpose or control.

The number of visits of supervision made at the different schools is also a matter of interest. Out of 131 schools 17 were not visited during the year by either state inspector or county superintendent; 66 were visited once by the county superintendent, 30 were visited twice by the county superintendent, 8 were visited by the state school inspector, and 18 were unable to supply information with regard to supervision.

PLANS FOR GRADE LESSONS

JOHN W. HALL
University of Cincinnati

The following plans are the outgrowth of students' work in methods in the University of Cincinnati. They are prepared for the students' own use in their teaching and seem to be of sufficient merit to warrant a somewhat wide circulation. Two ideas are emphasized—the richness of subject-matter and the organization of this material into good thought problems.

RECLAIMING THE SWAMP LAND IN MINNESOTA[1]

JEANNETTE C. STONE

(To be taken up after the study of irrigation and in contrast to it, in considering agriculture in the United States.)

Precede study with such arithmetic problems in percentage as the following:

In Tarr and McMurry's *New Geography* (second book), turn to the tables on population (p. 425).

1. Find the percentage of increase in the population of Minnesota during the last 10 years (16 per cent).

2. In the State of Wisconsin in the last 10 years ($12\frac{1}{2}$ per cent).

3. In the State of Ohio in the last 10 years ($13\frac{1}{2}$ per cent).

Let us compare the percentages of the increase in population in these states. What do the figures show us?

Ans. People are going to Minnesota.

Show Swamp Map of state.

Let us look at this map of the state of Minnesota.

What do you learn about the condition of the land there? (Swamp land.)

How much of the state is covered with the swamps?

Ans. Over two-thirds.

If you were going to farm, then, would you go to Minnesota? Why not?

But let us turn to the map on p. 183.

What do you learn from this map?

What do the statistics show?

Ans. Minnesota is the state leading in the production of wheat.

Turn to page 402.

[1] This plan is accompanied by an interesting collection of pictures and newspaper items which unfortunately cannot be adequately reproduced—ED.

What part of the supply of wheat raised in the United States comes from Minnesota?

Ans. Over 1/10.

Why do you suppose then that so many people have gone to Minnesota?

Ans. To take up wheat-raising.

Aim. *Let us find out, then, what conditions exist in Minnesota, which have made it the greatest wheat-producing state in our country.*

Name the requirements necessary for the raising of wheat.

Ans. Temperature; Rainfall; Soil.

Take up each topic in turn.

Temperature.—The average temperature in the state of Minnesota is 42°.

Explain what an "average temperature" is, telling that sometimes in the state of Minnesota the temperature goes 26° below zero in the winter and 98° above in summer.

Do the same for the state of Ohio (ave. 52°). How much difference?

Of course this difference in temperature will make some difference in the kind of products raised, but it certainly will not prevent the carrying on of agriculture. We know this fact to be true from the statistics in regard to the amount of wheat raised.

Rainfall.—Turn to p. 214. Find the average rainfall for the state of Minnesota. (20–30 in.) For the state of Ohio (30–40 in.). Compare. Do we have sufficient rainfall in this state for farming?

Ans. More than enough.

Do you think, then, that the rainfall in the State of Minnesota will be sufficient?

We have now determined that the temperature is mild enough for carrying on agriculture and that the rainfall is sufficient.

Soil.—Let us find out if Minnesota has any advantage over other parts of the country in respect to the conditions of the soil.

Turn to the map on p. 8. Read Secs. 3 and 4, "Extent of the Great Glacier and Changes That the Glacier Made." Also p. 10, (3) "Changes Made upon Our Farming." Read to find out:

What some of the effects of the work of the Great Glacier were on the state of Minnesota?

How would this benefit the composition of the mold?

After the formation of the lakes and swamps how could the fertility of the soil be increased?

Ans. By decaying animal and vegetable matter.

Knowing then, that the temperature in the state of Minnesota is not too severe for carrying on agriculture, that the rainfall is sufficient, that the soil is fertile, what would be the difficulty in farming?

Ans. Swamps.

Show picture of swamps.

What are some of the difficulties in trying to farm swamp land?

GETTING RID OF THE SWAMPS

The whole question, then, of carrying on agriculture in the state of Minnesota hinged on the project of getting rid of the swamps.

Do you know of any country in Europe that has had a similar problem to meet?

Ans. Holland.

Turn to the top of p. 278.

How did the Hollanders meet this problem?

Ans. Dikes and drainage ditches.

What advantage has the position of the state of Minnesota over that of Holland?

Ans. No surrounding ocean, therefore no need of dikes.

MEANS OF ACCOMPLISHMENT

If the state of Minnesota has been made more fit for carrying on agriculture how has this condition been accomplished?

Ans. By building drainage ditches.

Who would be interested in the building of these ditches?

Ans. Land-owners, counties and state.

Very often large sections of the land were wholly uninhabited, as much sometimes as a whole county. In such a case no one cared for the land, for it was unfit for use.

Would anyone be very interested in improving it?

As the population of the state increased, however, much of this swamp land was investigated and in 1886 one of the judges of the state by an open letter, published in the newspapers, called the attention of the public to the condition of the land and the opportunities which it offered for improvement.

So, for an example, let us take Marshall and Beltrami counties, shown here on the map, and find out how the building of ditches progressed there. In other counties much the same thing happened.

The richness of this land and the fact that it was capable of being easily well drained was first noticed by a civil engineer or a surveyor, W. R. Hoag, in company with an attorney, William J. Brown, on a trip through that territory in 1900.

What might a civil engineer and a lawyer do toward furthering the building of ditches in these counties?

Suppose the people became interested, could they and would they undertake this plan alone? Why not?

Ans. Cost.

But in the state of Minnesota, as soon as the importance of draining the land was realized, money was set aside for this purpose by the state.

Why would the legislators think it an important thing to improve the land?

Ans. Get people to come there.

How could the lawyer help the people in these counties under these conditions?

Ans. Advising them in securing the improvement, drawing up petitions, etc.

This was what happened in these counties. The people drew up a petition, with Mr. Brown's help. This petition was presented to the legislature and the money finally granted for the building of certain ditches, which Mr. Hoag, the civil engineer, had planned. The United States government has also recently made such appropriations.

BUILDING OF THE DITCHES

What are some of the things you would like to know about the building of these ditches?

Ans. Width, length, depth, shape. Process of building, etc., what becomes of the water drained off, cost.

PROCESS OF BUILDING

From what you already know about the condition of swamp lands, that is, the fact that they contain stagnant pools of water, rank with vegetation etc., what do you think would be some of the dangers of such an undertaking to the workmen?

Ans. Sinking in the mud. Mosquitoes.

It certainly would be difficult for surveyors to get around without sinking in the mud, for their work takes them everywhere. Can you think of a way by which they might avoid sinking in the mud?

Ans. Use of stilts.

Their instruments are even set on stilts.

Why wouldn't you expect to find mosquitoes in Minnesota?

Ans. Too cold.

But strange to say in spite of the cold, the mosquito pest is perhaps the most disagreeable thing about the whole state. The mosquitoes are hatched in the latter part of the summer in large numbers. So great that the people cannot even sit out on their porches unless they are screened. Fortunately the pest lasts only about a month.

What advantage could the workmen take of this?

Ans. Work where there are none.

From this standpoint, what will be one of the results derived from draining the land?

Ans. Fewer mosquitoes.

Before actually building the ditch, what would the workmen have to know?

Ans. Where to build it.

The civil engineers or the surveyors determine this part of the work.

Draw diagram on board (p. 175).

From this diagram, if you were the engineer, where would you plan to run the ditches? Why?

Ans. Outlet to carry away water drained.

But suppose the river isn't wide and deep enough to carry away all the water drained off. What would happen?

Ans. Water would spread over the land.

That is exactly what did happen.

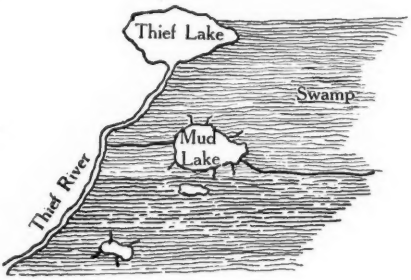
How could this condition be remedied?

Ans. Deepen the river channel.

And that is exactly what they did do. They deepened Thief River by means of dredges.

How many have seen the dredge-boats along the Ohio River? You know then how they would go about this part of the work.

Now we are ready to find out how they were going actually to dig the ditches throughout the counties. You have all seen men digging ditches in the city in laying pipes, repairing sewers, etc.



How do they do it? Why wouldn't this be a good way to dig ditches in Minnesota?

Ans. Too slow. Laborers hard to get. Cost.

Has anyone ever seen ditches dug in any other way?

Ans. By machines.

Show pictures. What advantages would this way of digging ditches have over the other?

Some of these machines are made so that horses or oxen can be used to draw them. Others are propelled by steam engines. These are called "traction engines."

Where do you suppose people would get these machines out in the swamp country?

Ans. Ship them in.

It is an interesting fact to know that some of the best machines shipped there are made in our own state, at Findlay, Ohio.

When this ditch-digger is in operation, as you see in the picture, it heaps up dirt along the side. Can you think of any use that might be made of this?

Ans. Since the side of the ditch is thus made higher than the land around it, it would serve as a splendid road in that country.

What would be the advantage of a road built in this manner?

Let's find out, now, just what building these ditches would mean.

ARITHMETIC PROBLEM

The contract that was let out to Mr. Hoag called for the building of 498 miles of ditches and the building of the same number of miles of highway within 2 years.

One of the first things we have to consider is the length of time the men can work in a year. Why?

1. Suppose the contractor found that the work could be carried on during six months of the year, working 8 hours per day. How much of the ditch and the road must be complete per day in order to finish the contract in the given time?

Ans. $1\frac{2}{3}$ mile.

2. The ditch is 20 ft. wide and 9 ft deep. How much dirt would have to be removed per day? per hour? per min.?

Ans. 1,330,560 cu. ft., 163,820 cu. ft., 274 cu. ft.

3. If one ditching machine will remove 18 cu. ft. per min., how many machines will this contractor be required to buy to complete the contract within 2 years?

4. If it takes 3 men to handle one machine and they receive on an average $2.00 per day, what will be the cost of labor to complete the work?

Ans. $27,648.

5. If it costs $2.50 per acre to drain land, and $20 per acre to irrigate land, find the difference in cost in improving 480 acres of land.

From what you already know about irrigation give reasons for its being so much more expensive.

Besides the fertility of the soil, the climate, the ease of draining the land, etc., there is another reason for so many people coming especially to this part of the country.

At one time much of this land was set aside as an Indian Reservation. Does anyone know what has become of the Indians?

Since there are very few Indians left, they no longer need this land.

What would be the best thing for the government to do with such lands?

The government has opened this land up as homestead land, and as we have already found out, is even assisting in building the ditches.

Can you see how this will in any way affect the settlement of Canada?

Ans. Turn the tide of immigration.

On the whole, how will the improvement of this land benefit the United States?

What effect has the building of the drainage system had on the state of Minnesota?

Ans. Made it the greatest wheat-producing state in the Union.

A LESSON PLAN FOR THE STUDY OF ALASKA

ELMORE C. WALTHER

Aim: In what ways is Alaska a profitable possession of the United States?

What interested the Russians in Alaska?

Why should the fur industry interest the Russians more than the Americans?

What must the Russians do in order to prevent the Canadians from taking furs on Russian territory?

Would this be worth while?

At what other disadvantages would Russia be in protecting this great strip of territory?

What other countries, besides Russia, would make inroads on the fur resources of Alaska?

What effect would this have on the present industry? in the future?

What must the United States do in order to protect this industry?

Suggest some plan to accomplish this. Read text, p. 150 (Sealing)[1]; read *R.C.G.*, §218.

Would this industry alone pay the United States to keep this vast territory?

What, then, must we do in order to make Alaska worth while? (Develop the resources.)

FISHING

Why would this industry be the easiest to develop?

What physical conditions would make the fish of Alaska desirable?

Why would they be easy to catch?

Where would they be more abundant, in the open sea, or near the shore? (Reasons.)

Make an outline map of Alaska. Show the extent of the 100-fathom and 200-fathom depths. Locate the places where the different fish abound. Use *R.C.G.*, p. 211; text, p. 188.

During what season are salmon most easily caught? How and where? (Teacher add information.)

What reasons can you give for locating the fish canneries in Alaska?

Where in Alaska, would you locate them so as to be easily operated in the spring? Draw conclusion after studying (*a*) Isothermal charts, text, pp. 225 and 226; (*b*) Ocean current charts, text, p. 220.

COAL AND LUMBER

What would we need in order to establish a fish cannery in Alaska? (1) Machinery; (2) Fishing Craft; (3) Fuel.

What material would be most easily accessible for fuel?

[1] Abbreviations: Text used: Tarr and McMurry, Second Book; *R.C.G.* = *Robinson's Commercial Geography.* Material for Reports can be obtained from recent articles on Alaska in: *The Review of Reviews, The Outlook, The Technical World.*

Would it be wise to continue to use timber for fuel?

To what extent could Alaska furnish her home industries with fuel? (Report: "The Coal Resources of Alaska").

AGRICULTURAL POSSIBILITIES

Where would most of the fish canned in Alaska be sold?

Look up the population of Alaska and compare with U.S.; Ohio; Hamilton Co.; Cincinnati; text, p. 424; p. 30, Appendix.

Would any be sold in Alaska? (Reasons.)

Do you think that Alaska will be a future for the fishing industry?

Upon what food do you think the Alaskans will live, besides fish? (text, p. 152).

Where could vegetables be raised in Alaska? Determine from rainfall map, p. 213 (text); isothermal charts, pp. 225 and 226 (text).

To whom would you sell this garden truck?

What other crops could you raise?

MINERAL RESOURCES

What industry would the remainder of the people be engaged in? (text, p. 151).

What has been responsible for the rapid development of that country? (Report: "Gold Mining in Alaska," the "Copper Resources of Alaska," the "Tin Resources of Alaska").

Would it be advisable to invest much money in farm lands in Alaska as yet? (Read last ¶ of text, p. 152.)

What kinds of people would you expect to find in Alaska? (Races of Mankind chart; text, Fig. 329).

Which of the races is most responsible for the development of that country?

Of what advantage would it be to Uncle Sam to educate these people? (Report: The Awakening of Alaska).

Summary: In what way has Secretary W. H. Seward shown himself to be a far-sighted statesman when he said: "The Pacific Ocean, its shores, its islands, and the vast region beyond will become the chief theater of events in the world's great hereafter"?

Test: Write an account suitable for a railroad folder, making Alaska as attractive as possible for: (*a*) The tourist, (*b*) The farmer, (*c*) The stock-raiser, (*d*) The prospector, (*e*) The miner and promoter, (*f*) The hunter.

Indicate (or cut out and paste in your account) the pictures that you would use to illustrate this folder.

For what railroad line would you make this folder?

A TEST IN GEOGRAPHY AT CLOSE OF STUDY OF AFRICA

FREDERICK D. COTTER

This set of examination questions is prepared with the idea that an examination should test primarily a child's ability to use the facts which he has acquired; that in the examination itself there should be growth along this line; and that knowledge should also be increased.

Children are to be allowed to use geographies and any other books from which they may gather information. They are not to communicate with each other or receive any help from the teacher.

A certain wealthy Englishman named Cecil Rhodes had become interested in Africa. He had done much to develop the country and now was in the Southern Park in the Transvaal. It occurred to him that a railroad from Cairo in the north to Cape Town in the south would do more to help out his idea of developing Africa, than anything else. What arguments would he use to induce people to invest their money in this scheme (use books). Suggest a good name for this railroad. Use your maps and decide the best route for this railroad. Give four or five good reasons for the route you selected. Trace on the blank map of Africa the route you selected.

What difficulties would be met with in this undertaking with regard to labor? (*a*) Where would they get unskilled laborers? Why? (*b*) Where would they get the skilled workers (engineers, superintendent)? What are the dangers to health of the workers? How would they be overcome?

Where would the material for the construction of the road probably be obtained? Why? What would be the cost per mile of building this railroad compared with the cost per mile in the United States? Give one or two reasons for this. Where would they obtain their rolling stock? What fuel would they use? Why? Where would they get it? Would there be more passenger or freight trains? Why? What would be the occupations of the people who traveled on this road? What would the principal articles of freight be (*a*) from the coast to the interior of the land; (*b*) from the interior to the coast?

Effect of this railroad.

Name four or five results on the continent.

Give four or five ways in which this railroad would benefit England. In what countries would there be magazine and newspaper articles about this railroad?

Think about whether this project would have any effect on the United States.

APPRENTICESHIP UNDER THE ENGLISH GILD SYSTEM

J. F. SCOTT
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If history is to be used effectively to shed light upon present problems it must be used guardedly; for the exact conditions of the past are never reproduced in the present. Many a problem of bygone ages has reappeared in modern times, but with so different a setting that the solution attained in the past may be ineffective today. So in the case of the problem of industrial education, which has become so prominent since the disappearance of the American frontier, it must not be forgotten by those who propose a revival of the apprenticeship system that times have changed and that apprenticeship, as it existed in England from the thirteenth to the nineteenth century, would be utterly out of place in the majority of occupations today. On the other hand the system was, in its time, a success; for no institution could have lasted as long as this did unless it had met certain vital social needs. It accomplished certain results for the individual and for society which we expect the industrial training of today to accomplish. A study of certain of its phases may, then, be of some use.

The success of the apprenticeship system during the Middle Ages and the period of the Renaissance was largely due to two factors: First, the close personal relationship and identity of interest existing between master and apprentice; and second, the supervision of master and apprentice by the craft gilds. These factors were fostered by the social and economic conditions of the Middle Ages, but passed away under the changed economy of modern times. To the loss of the proper personal relationship and identity of interest existing between master and apprentice and to the lack of adequate supervision over this relationship is partially due the decay of the apprenticeship system.

As Sombart points out, one can only understand the relation

of the master to his "Hilfspersonen" by remembering that all handicrafts had their origin in family life. Journeymen and apprentices entered completely into the family circle and in the common activity found a bond of union.[1] The reciprocal duties of master and apprentice are set forth in a general way in the indentures—articles of agreement at the time of binding—many of which are preserved in ancient records.[2] These indentures show that the chief duty of the apprentice was to serve his master faithfully, not only in his master's business, but in the performance of household tasks or other services; the master was obliged to teach the lad his trade, to house, feed, and clothe him. More than this, he was supposed to give the youth such moral and religious training as a boy of immature years would naturally require.[3] In a word it was the master's duty to prepare the boy to be not merely a good craftsman but a good citizen as well.[4] Finally the closeness of the personal relationship between the two is clearly brought out by the fact that not rarely the apprentice led his master's daughter a blushing bride to the altar.[5]

The apprenticeship system, as it existed in mediaeval times, offered opportunity to the apprentice of learning all branches of his trade. The shop was small; master and apprentice often worked side by side at the same bench. The master himself worked at all processes of his handicraft, and therefore it was comparatively easy for him to teach all processes to the lad at his side. It was comparatively easy, too, for the lad to follow all the

[1] Sombart, *Der moderne Kapitalismus*, I, 118; *vide* also Strype's ed. of Stow's *Survey of London*, II, 331.

[2] Bateson, *Leicester*, III, 50; Cunningham, *Growth of English Industry and Commerce, Early and Middle Ages*, pp. 349–50; Noble, *Ironmongers*, pp. 44–45; Clode, *Early History of the Merchant Taylors*, I, 344; Hibbert, *English Gilds*, pp. 52–53; Madox, *Formulare Anglicanum*, No. clxxviii; Bird, *Law Selections*, pp. 76 ff; Ashley, *Economic History and Theory*, II, 86, refers to a number of others.

[3] An ordinance of the Shoemaker's Gild of Carlisle provides that no master shall allow his apprentice to play cards in the master's house (Ferguson and Nanson, *Gilds of Carlisle*, p. 179). Some gilds required masters to see that apprentices went to church (Welch, *Pewterers*, I, 223; *Clothworkers' Ordinances*, pp. 133, 134; *vide* also Cunningham, "Growth of English Industry," etc., *Modern Times*, Part II, 629–30).

[4] "London 'Prentices," *Colburn Magazine*, V, 174, quoted from the *Cities' Advocate*, printed 1629; Strype's ed. of Stow's *Survey of London*, II, 331.

[5] *Ibid.*

workings of his master and to imitate them. The number of apprentices being small the master could give each one a large part of his attention. Furthermore, as there were but few apprentices[1] and journeymen, there was but little division of labor and therefore but little of the modern tendency to keep a boy employed on one or two processes to the exclusion of all others. It was to the interest of the master that the apprentice be able to assist him at every process of the craft. To the master, too, accrued the profits of the apprentice's toil during the latter's term of service,[2] and the more skilful the boy, the greater the profits of his employer.

In the same way the apprenticeship system favored the development of artistic ability. The long term of service, usually seven years in England, somewhat less on the Continent,[3] gave opportunity for the acquirement of that refinement of skill so necessary to the true artist. The careful, individual attention given by the right sort of master to the apprentice enabled the latter to avoid superficiality, while the master's own work furnished a worthy example for the lad's imitative powers. Then, too, since whatever the apprentice earned went to his master, the young man was forced to find his rewards, not in immediate pecuniary gain, which might tempt him to quick, superficial work, but in his master's praise and in the joy of artistic creation. Finally the fact that he was one day to be a master himself would naturally lead the apprentice to a desire to acquire a knowledge of all processes of his craft and to a dexterity of hand and artistic skill in construction. In general, then, the interests of master and apprentice in the

[1] From the fifteenth century onward, however, the English gilds had frequently to forbid masters to take more than two, three, or four apprentices. This prohibition the wealthier masters resented and came more and more to disregard. Harris, *Coventry Leet Book*, I, 92; Smith, T., *English Gilds*, pp. 315, 316; Wadmore, *Skinners*, p. 26; Young, *Barber-Surgeons*, p. 64; Lambert, J. M., *Two Thousand Years of Gild Life*, p. 206; Welch, *Pewterers*, I, iii; *ibid.*, pp. 185, 237–38; Smith, Adam, *Wealth of Nations* (Cannan ed.) I, 121, etc.

[2] "Whatever the Apprentice gets of his own labour, or of his Master's Occupation or Stock, he getteth to him whose apprentice he is."—Strype's ed. of Stow's *Survey of London*, II, 434.

[3] Brentano, *History of Gilds*, p. cxxix. While the period of apprenticeship was shorter on the Continent than in England, the period of journeyman service was longer. This period of journeymanship fostered the development of artistic skill.

days of handicraft were identical. Apart from the matter of personal attachment between the two, it was to the economic interest of each that the apprentice should become a skilled, artistic master-craftsman.

The results of the apprenticeship system are to be found in the artistic handicraft work of the later Middle Ages and the Renaissance. While it may be true, as Sombart says, that the finest productions are the work of artists who chose to express themselves through the crafts, rather than the work of skilled artisans,[1] yet there are proofs that there were many artisans of high artistic ability. Sombart shows that it is unsafe to judge the craftsmanship of the Renaissance by the treasures of our "Arts and Crafts" museums, treasures which possess unusual artistic merit and which he holds to be the work of artists. On the other hand there are certain relics in these museums which are preserved, not for their artistic value, but for their historic or antiquarian worth, as interesting witnesses to a bygone age. A suit of armor, for example, would find a niche in the museum whether it possessed artistic merit or not. Yet if one takes into consideration the lack of machinery in mediaeval times it must be admitted that even the average suit of armor is a work of art. And it is the work of an armorer—an artisan—not an artist who chose to express himself through the medium of armor-manufacture.

As further proof of the artistic instinct and power of the mediaeval craftsman take some of the exquisite details in the cathedrals. The carvings on the pews or the walls, the wonderful ironwork and other details indicate the skilled hand and aesthetic feeling of the craftsman. So numerous are these details that it is impossible to think of them as the work of artists rather than of artisans. It is hardly possible that the obscene carvings so often tucked away in odd corners or cornices—carvings so incongruous with the majestic spiritual ideal dominating the great structure—were planned by

[1] "Die Renaissancezeit hat ein so herrliches Kunstgewerbe nicht deshalb besessen, weil die Handwerker Künstler, sondern weil die Künstler Handwerker waren, richtiger." *Der moderne Kapitalismus*, I, 85. Sombart's estimate of the artistic ability of the average craftsman is, I think, too low. *Vide* his discussion of this in I, 85, and compare with the evidence presented above.

the architect; they are far more likely to be the expression of the coarse but artistic sense of humor of some long-forgotten artisan.

Jacquemart tells us that the artisans known as joiners developed the handicraft of making and decorating furniture in a wonderful manner. They approached the sculptors in artistic power.[1] It is not necessary to multiply examples. Enough has been said to show that dexterity of hand and power of artistic expression were widespread in the days when the apprenticeship system flourished.

The efficiency of the apprenticeship system was guarded by gild supervision. It may be objected that I have praised the mediaeval apprenticeship system too highly, that I have represented an ideal condition of affairs. It may be pointed out that masters sometimes ill treated their apprentices, neglected them, and failed to instruct them properly, and that apprentices were sometimes idle, thievish, and faithless. All this is true, even of the mediaeval system, though most of the examples of such bad conduct come from the seventeenth and eighteenth centuries. In mediaeval times the danger of such bad consequences was lessened by the fact that both master and apprentice were responsible to the gild. The gilds passed many ordinances to regulate the conduct of master and apprentice,[2] and these ordinances were enforced in the gild courts.[3] Such supervision over conduct was far more

[1] *History of Furniture*, p. 22.

[2] *Vide* in this connection Welch, *Pewterers*, I, 4; Riley, *Memorials of London Life*, pp. 243, 247; Herbert, *London Livery Companies*, I, 13; Harris, *Coventry Leet Book*, Part III, 671; Young, *Barber-Surgeons*, p. 181, etc.

[3] "The authority of the craft, even after it had altogether fallen into the hands of its wealthier members, continued to be used for the protection alike of apprentices and of journeymen against the violence of their employers."—Ashley, *Economic History and Theory*, II, 106.

The following case arose in the court of the Pewterers' Company of London in 1559. "At the same Courte John Smythe Sometime apprentice with Geffery Mathewe was commytted to warde by the Mr [master of the company] wardens and assystance for that he had promysed to serve a certayne tyme with John Cutler as maye apeare the last yeare and after his promys within ii days after went to maydstone and wrought with a Tynkerd and made hym mowlds."—Welch, *Pewterers*, I, 207.

Clode, C. M., *Early History of Merchant Taylors*, I, 209: "Apprentices were under the care of the Company, and masters were fined for ill treatment. . . . . In the case of misusing an apprentice an entry of April 2d, 1563, shows that very sum-

effective when the towns were small and the actions of the gild members open to close scrutiny than when the towns had grown to cities and less was known of the private life of master and apprentice.

The supervision of the gild was not confined to observation and control of conduct but was extended to the actual work of instruction as well. Sometimes the gilds specified what the master should teach. Thus the Clockmakers of London in 1632 provided that every person of their trade should "teach and instruct his said Apprentice and Apprentices in such manner and form as their Predecessors have done, which is to keep daily him and them in his House, and there by himself or his sufficient Journeyman, teach or instruct them in the making of Cases or Boxes of Silver or Brass, and likewise the several Springs belonging to a Watch, Clock or Larum, and likewise all other particular and peculiar things belonging to such Watches, Clocks, Larums, Mathematical Instruments, and Sun-Dials his or their Master shall teach and instruct them in."[1] The Apothecaries and the Barber-Surgeons of London made rather elaborate provision for the matters to be taught their apprentices;[2] but as a rule it was not necessary for the gilds to specify the subject-matter, as the masters knew perfectly well what was expected of them.

While the gilds did not usually specify what was to be taught they did take measures to see that the teaching was properly done. They did not intend to allow apprenticeship to become a farce nor

mary measures were taken against his master, thus, 'The Wardens have comyted Thomas Palmer to pryson for that he hath broken Henry Bourefelde his apprentice's hedd without any just cause. Henry Bourfelde by composition had comytted his two apprentices to serve with Thomas Palmer during and for so long time and such consideration as they were agreed. And for that the said Thomas Palmer hath not only evill used himself towards the said apprentices, but also for that they have not had of hym sufficient meate and drynke as they ought to have had' " (p. 209).

"Jan. 12, 1571, in case where cassock had been made too small, Master and Wardens ordered that defendant pay the plaintiff forty shillings 'and shall take to hym self the said garment to make his best pfit accordingly' " (*ibid.*, p. 210; from records of the company).

[1] Atkins, *Clockmakers*, p. 44.

[2] Barrett, *History of the Apothecaries of London*, p. xxxiii; *ibid.*, pp. 197–98; Young, *Barber-Surgeons*, pp. 309–10.

to permit the apprentice to become a master at the end of seven years whether or not he was a skilled craftsman. One of the objects of the gilds was the maintenance of a high standard of production and for this they were responsible to the community.[1] In at least one case, that of the Cappers of Coventry, it was a duty of the principal master of the craft to go round the city annually, examining every apprentice to see that he was receiving proper instruction from his master.

Practically all the gilds insisted on some sort of an examination of the apprentice at the end of his term.[2] At first the examination merely took the form of a requirement that the master or other "able men" testify to the fitness of the apprentice to "occupy" his craft.[3] Later on, however, the gilds insisted that the apprentice be examined by the masters or chief officers of the company and proved "sufficient and able to occupie."[4] Thus the Clothworkers of London insisted that the candidate for mastership "shear and worke" in the Common Hall of the gild before the Master, Wardens, and certain of the assistants.[5] The Shoemakers' Gild of Carlisle required that the apprentice, after completing his term "have foure paire of shoes given him to worke"; if the shoes were well wrought he was to be admitted a journeyman, but if not he

[1] Webb, *History of Trade Unionism*, p. 17.

[2] Bickley, *Little Red Book of Bristol*, II, 96; "Ordinances of the Skinners," 1408; *ibid.*, p. 104, "Ordinances of the Cordwainers"; *Hist. Mss. Comm., Twelfth Report*, IX, 521, "Ordinances of the Butchers of Gloucester," 1454; *ibid., Fourteenth Report*, VIII, 135, "Ordinances of the Weavers of Bury St. Edmunds," 1477; Black, W. H., *Leathersellers*, p. 123, "Ordinances of the Pouchmakers," 1501; "Clothworkers' Ordinances," p. 26; Welch, *Pewterers*, II, 243; Fox, F. F., *Merchant Taylors of Bristol*, p. 61. Many other examples might be adduced.

[3] *Munimenta, Gildhallae Lond.*, III, 442. *Liber Memorandorum*, "Ordinance of the Cordwainers," 1272; Coote, *Transactions of the London and Middlesex Historical Society*, IV (1871), 30; Sharpe, *Calendar of Letter-Books*, Letter Book E, p. 13; Hudson, and Tingey, *Records of Norwich*, I, 178; Kerry, in the *Antiquary*, XXIII, 28; Bickley, *Little Red Book of Bristol*, I, 38; *ibid.*, II, 87.

[4] The first requirement of this sort which I have seen was one made by the Fullers of Northampton about the middle of the fifteenth century. Markham and Cox, *Records of Norhampton*, I, 292; see also "Ordinances of the Weavers of Bury St. Edmunds," *Hist. Mss. Comm., Fourteenth Report*, VIII, 135.

[5] "Clothworkers' Ordinances," p. 26, *Ordinances of 1531–32*.

must be a "hireman."[1] Rather more complicated examinations were laid down in the ordinances of the Barber-Surgeons and the Apothecaries,[2] examinations which must have done much toward changing the craft of "barbery" into the science of surgery, the art of the apothecaries into the science of medicine.

The difficulty of the examination must have varied greatly in different gilds, being probably rather a hard test in such crafts as the Apothecaries and Barber-Surgeons, the practice of whose arts required some skill, and rather a simple matter with the Fullers and other mechanical crafts. There can be no doubt that it must have done much toward holding the apprentice to a high standard of workmanship. Its efficacy, of course, varied with the standards of the individual gilds. It seems to me that in the case of the industrial arts the examination system would be more effective than examinations upon book-knowledge. The candidate required to make a pair of shoes before the craft masters must be possessed of real skill in his art in order to do well. Dexterity of hand cannot be "crammed." Thus the strength of the apprenticeship system was greatly increased by the gilds through their surveillance of the relations between master and apprentice and through their examination system.

Whatever may have been its weak points the mediaeval apprenticeship system is by no means to be despised; it was well adapted to the social and economic conditions of the time. The household, the small shop, and the gild were the great factors in industrial life. There was little capital, little machinery, no factory system, no great gulf between employer and employee. The apprentice became a part of his master's household and was given a home and instruction in a trade at but little expense save that of time. If the master did his duty, skill and artistic ability were developed in the lad. At the end of his term of service he passed into the

[1] Ferguson and Nanson, *Gilds of Carlisle*, pp. 179–80, "Shoemakers' Ordinances," 1595. The Bakers of York required that the apprentice, after completing his term, "shall at his first settinge up bake a batche of bread, and entreat the Searchers to come and se the same, whether it be well, lawfulllye and workmanlie wrought and done or no."—Smith, L.T., *Archaeological Review*, I, 222.

[2] Young, *Barber-Surgeons*, p. 310; Barrett, *History of the Apothecaries*, p. xxxiii.

ranks of the master craftsmen and looked forward to a life of comparative economic security and perhaps of some honor as a skilled artisan, merchant, or citizen. He might even hope to become Lord Mayor of London. If there was little opportunity for him to rise out of his class there was great opportunity for him to rise in it.

On the other hand the apprentice was an important asset to the master, giving him increasingly valuable aid in his craft work, attending to his customers, and performing irksome menial duties for the master, the master's wife, and other members of the household. Broadly speaking, the interests of master and man did not conflict, but were in large measure identical. Such a relationship grew from the fact that the household and the small shop were the foundations of industry.

Master and apprentice were held to their duty by the craft gild. By means of its general supervision, and especially by means of the examination system, the gild was able to see that a certain standard of workmanship was maintained. Towns were small, gild members few, concealment of bad conduct difficult, so that gild supervision could be made very effective.

We need not hesitate to affirm that the result of this system of apprenticeship was the development of well-wrought and even artistic productions. It can scarcely be denied that the superiority of the later Middle Ages and of the Renaissance over the early Middle Ages, in the field of the industrial arts, was due in some degree to the apprenticeship system. The system offered opportunity for the development of skill and artistic ability, and while it is true that not every apprentice took advantage of this opportunity, some apprentices did, and produced good work. On the whole, the institution met the needs of mediaeval and early modern times as a system of industrial education.

In a subsequent article it will be shown that the system of apprenticeship declined in the seventeenth and eighteenth centuries as the result of changed social and economic conditions; and that the existence of some of these conditions today will operate to render a revival of the institution, an inadequate solution of the present problem of industrial education.

OBSERVATIONS CONCERNING THE ORGANIZATION OF SCHOOLS AND CERTAIN PHASES OF EDUCATIONAL WORK IN GERMANY

GEORGE KOEPPEL
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The organization and administration of schools and school systems is of such vast importance, and naturally of such great interest to a principal, that I gave a great deal of attention to the study of the organization and management of schools. As to special fields, I studied the following phases of educational activity:

a) Schools for those children whose progress has been retarded; akin to our ungraded classes.

b) Schools for backward or exceptional children.

c) Parental schools.

d) Continuation and trade schools.

e) Open-air schools (*Waldschulen*) and recreation resorts in the woods (*Walderholungsstätten*).

f) Physical education: Gymnastics, playgrounds, outings, *Schülerwanderungen*, vacation colonies.

It was at all times my effort to find the best of what is *thoroughly typical* of the educational policy of the places visited, and I shall not report on anything that is exceptional, unusual, or simply experimental. I shall restrict myself to pointing out what seems to me particularly worthy of our attention.

Our system of public education is so different from that of the countries which I visited that it seems necessary to point out briefly the essential differences in order to avoid referring to them repeatedly in the remarks that are to follow.

At least two parallel systems of schools exist in Germany, and each is represented by several types of schools. With us, all pupils have to pass the eight grades of the elementary school before they are admitted to the high schools, and there is practically no other way of reaching these schools. High schools are the direct continuation of the district schools and depend entirely upon the

preparation that is given all pupils alike in the elementary schools. Not so in Europe. Generally speaking, all pupils who will probably receive but an elementary education and who will leave school at the age of fourteen or fifteen, attend the lower grade of schools (*Gemeindeschule*, *Volksschule*, *Districtschule*, *Mittelschule*, *Bürgerschule*), while most pupils who probably will receive what corresponds to our high-school and college education enter after three to four years of preparation, *at the age of nine to ten years*, the higher schools (*Realschule*, *Oberrealschule*, *Realgymnasium*, *Reformgymnasium*, *Gymnasium*). These higher schools often have an elementary department that prepares the young pupils in three years for the lowest class of the institution. A good pupil of the common schools may, at the end of the fourth year, enter the lowest class of the higher schools by examination. The courses of the higher schools are carefully planned to meet from the very beginning the conditions required by the higher aim. As an example of the broadness of the foundation may be mentioned that the youngest pupils study, besides the common branches, French five hours, natural science two hours, history two hours per week in *Realschulen*, and eight or nine hours of Latin in *Gymnasia*.

This very early parallelism of the elementary schools and of the higher institutions is one of the most interesting and prominent distinctions from our system, and while apparently less democratic, it is in reality of advantage to the vast majority of both classes of pupils.

The sole function of the elementary school is the preparation of pupils for the ordinary walks of life, and matter and method are planned with this aim definitely in view.

In the higher schools, the long courses of training in definite subjects, harmoniously arranged from grade to grade and *continued through a number of years*, produce a degree of thoroughness and power that cannot be attained in another way. These schools provide a high degree of general culture and also prepare for the universities and highest technical schools.

A student of schools and systems will, of course, make comparison with the educational conditions at home and use the

system that he knows best as a standard of measurement. It is, however, necessary, when comparing the efficiency of our system with that of Germany, to keep distinctly in mind that in Germany these two great classes of schools operate side by side, and that it would evidently be incorrect and unfair to compare our common school below the high school with the *Volksschule* alone. The only reasonable procedure is to consider the average age of pupils attending our grades, and compare broadness and depth of subject-matter taught, the methods of instruction, and the proficiency attained by pupils of corresponding age without reference to the kind of school they attend.

To give an idea of the comprehensive nature of even the elementary courses, and of the time devoted to the several branches in the various grades, I insert the weekly program for the lowest type of elementary schools.

ELEMENTARY SCHOOLS

WEEKLY TIME TABLE OF THE GEMEINDESCHULEN OF BERLIN
NUMBER OF HOURS PER WEEK FOR EACH STUDY AND GRADE

	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade	Seventh Grade	Eighth Grade
Religion	3	3	3	4	4	4	4	4
Reading, language, spelling	8	7	7	6	6	6	6	6
Object Lessons	2	2	2	..	..	..	..	..
Geography	..	..	..	2	2	2	2	2
History	..	..	..	2	2	2	2	3
Arithmetic	4	4	4	4	4	4	4	4
Geometry	..	..	..	..	..	3	3	3
Nature-study, including physiology, elementary physics, and chemistry	..	..	..	2	2	4	4	3
Drawing	..	1	2	2	2	2	2	2
Writing	..	2	2	2	2	1	1	1
Singing	1	1	2	2	2	2	2	2
Gymnastics	2	2	2	2	2	2	2	2
Total hours	20	22	24	28	28	32	32	32

Manual training, bathing (shower baths), swimming, attendance on playground games and sports are optional.

In examining this table we find that ample time is given to the fundamental branches, but we note especially that the range

of subjects taught in this lowest class of elementary schools provides for its pupils a broader and more comprehensive training than we give in our district schools. Indeed, our course absolutely lacks instruction in branches that are both useful in their training value and practical for life.

In the lowest grades stories from history are taught in connection with reading and object lessons, but from the fourth grade upward regular lessons in history are given two hours, and in the eighth grade three hours a week.

Geometry is taught in the *sixth, seventh,* and *eighth* grades, three hours a week, besides four hours of arithmetic a week throughout the course.

Regular lessons in nature-study are given in all grades, but in addition *elementary physics and chemistry* are taught in the *sixth, seventh,* and *eighth grades* two or three hours a week. Excellent illustrative material, apparatus, and supplies are furnished to make this instruction effective, and the pupils of these schools acquire a good knowledge of common things and of natural laws and phenomena of which our boys and girls are sadly ignorant. The teaching of elementary physics is especially valuable for the training it supplies in logical thinking and in definiteness of oral and written expression. My observations lead me to recommend an early reintroduction of elementary physics into our district-school course.

The following weekly time table is representative of one type of the higher schools, the *Oberrealschule.* The lower five or six classes are attended by children of the average age of nine to fourteen or fifteen years and may therefore be approximately compared to our classes from the fourth to the eighth grade inclusive. The heavy line in the table marks off these grades from the higher grades.

In addition to these subjects the following are optional: Latin, manual training, shorthand, orchestral music. From this course it appears that in the grades corresponding to our fourth to eighth a broad and solid foundation is laid not only in the common branches but also in history, mathematics, the natural sciences, physics, chemistry, French, and English, and that *all* these sub-

WEEKLY TIME TABLE OF AN OBERREALSCHULE AT CHARLOTTENBURG

NUMBER OF HOURS PER WEEK FOR EACH STUDY AND GRADE

	Grade VI	Grade V	Grade IV	Grade IIIB	Grade IIIA	Grade IIB	Grade IIA	Grade IB	Grade IA
Age on entering	9.55	10.7	11.91	13.3	14.33	15.5	16.6	17.17	18.17
Religion	3	2	2	2	2	2	2	2	2
German	6	5	4	4	4	3	4	4	4
Geography	2	2	2	2	2	1	1	1	1
History	..	..	3	2	2	2	3	3	3
Arithmetic	4	4	..	..	..	..	..	..	..
Mathematics	..	..	6	5	5	5	5	5	5
Natural science	2	2	2	2	2	2	..	..	..
Physics	..	..	..	..	2	2	3	3	3
Chemistry	..	..	..	..	..	2	3	3	3 (2)*
French	6	6	6	6	5	5	4	4	4
English	..	..	..	5	4	4	4	4	4
Drawing, freehand	..	2	2	2	2	2	2	2	2
Drawing, linear	..	..	..	..	(2)	(2)	(2)	(2)	(2)*
Writing	2	2	2	1	1	..	..	..	..
Singing	2	2	2	2	2	2	2	2	2
Gymnastics	3	3	3	3	3	3	3	3	3
	30	30	34	36	36	35	36	36	36
Optional	..	..	..	..	2	2	2	2	4
Total hours per week	30	30	34	36	38	37	38	38	40

*Optional.

jects are *continued throughout the course*, every pupil being required to take all these lessons. The graduates of this school have received instruction in

Natural sciences	6 years
Physics	5 years
Chemistry	4 years
Mathematics	7 years
History	7 years
Geography	9 years
German	9 years
French	9 years
English	6 years

This long-continued application to a somewhat limited number of subjects provides an excellent scientific and modern classical training, and results in a surprising accuracy of knowledge and remarkable thoroughness in the students.

Other conditions that contribute to this result need special mention.

The pupils of these schools are taught from thirty to forty hours a week (including recesses) which is largely in excess of the time that our pupils spend in school.

As the lessons are distributed over six forenoons and one to three afternoons, and as recesses are frequent, the pupils are not overburdened.

Homework is required of the pupils of all grades.

It is clear that greater progress is possible and that more time can be taken for reviews and for deepening and broadening the instruction than where the actual school time per week is so exceedingly limited as with us. Eighty per cent of our pupils attend school but twenty-five hours a week including recesses. *The time spent in school by German pupils therefore exceeds* our time in the fourth and fifth grades by 20 per cent, in the sixth grade by 36 per cent, and in the seventh and eighth grades by about 48 per cent!

The cheerfulness and vigor displayed by the boys during their gymnastic exercises and games as well as in their sports on the playground are proof that the time given to their studies is not excessive.

A distinctive feature in all types of higher schools is the *class organization* of students throughout the course. The members of the upper grades, corresponding in age, approximately to those in our high-school grades, are formed into classes, each being assigned to a certain classroom where all instruction is given excepting laboratory work. Each class is in charge of a class teacher (*ordinarius*) who is especially responsible for the welfare of his class. This teacher instructs his class usually in one or two branches, and other teachers, specialists in their fields, enter the room successively to take charge of the class so that each group or class as a unit is *during the whole school day* under the direct supervision, instruction, and guidance of a teacher. In the school quoted, for instance, one Senior class numbering but 15 students, and another Senior class numbering 25 students, remained each intact as an organization for one year, and were every minute of the school time under the influence of a number of very fine men who are

excellent teachers; and so are all the classes of this school and of the schools of its type.

Considering the fact that *our pupils of the high schools* usually take four studies of 45 minutes each per day, they are *under this direct influence of their teachers only 15 hours each week*, while German pupils of equal rank *enjoy this advantage more than thirty hours* each week.

This continuous influence of teachers, the class organization, and the definiteness of subjects studied for many years, easily account for the frequent reports of the excellency of the German higher schools.

It needs to be added that teaching is a profession in Germany and that all teachers of these higher schools are men of excellent preparation for their work.

Concerning the work required of teachers, the principle prevails in all classes of schools that the quantity of work is reduced as the teacher's years of service increase. The *Oberrealschule* No. 1 of Charlottenburg, mentioned above, contains *18 classes*, but the *number of teachers employed is 28;* 13 of these teach from 21–24 hours a week, including recesses; 13 teach 20 hours a week, including recesses; 2 teach 17 hours a week, including recesses. Their lessons are irregularly distributed during the week according to the requirements of classes.

A FUNDAMENTAL PRINCIPLE OF SUCCESS

One of the most prominent merits of German schools is the conscious and succcessful effort of teachers to make all instruction as far as possible objective. On the outer walls of a Dresden school building, one of the great principles of education, as announced by Pestalozzi, is inscribed in gilt letters: "Der Ursprung und das Fundament aller Erkenntniss ist die Anschauung. Von dieser Form hat der Unterricht auszugehen."

This principle seems to be the soul of the teachers' work in all schools of Germany, and in elementary schools in particular; it pervades all educational activity, and produces very good, often excellent teaching. The teachers do not merely conduct recitations or hear lessons, but teach the subject in hand till the pupils

have comprehended it, till they have gained a clear, definite, vivid, and lasting knowledge of the lesson. To enable the teachers to apply this great fundamental principle, an astonishing wealth of material (*Lehrmittel*) is at his command. The liberality with which the common schools in Germany are fitted out with all sorts of material devised to make good teaching more effective by appealing directly to the senses is one of the features that cannot be too strongly emphasized. Every school building has one or more rooms, large and conveniently located, where this *Anschauungsmaterial* is systematically arranged and easily accessible. Good cupboards, stands, supports, drawers, and other fixtures are provided to hold and protect these things. A definite sum of money for each class is appropriated each year for the enlargement of this collection. Besides maps and globes we may find here a large variety of excellent pictures of large size illustrating nearly all subjects taught in geography, nature-study, physiology, hygiene, first aid to the injured, history, the progress of civilization, and all fields of human activity. All these pictorial illustrations are large enough to be distinctly seen by all members of the class, and many are designed by artists.

The same subjects are also illustrated by collections of natural or artificial specimens of natural and industrial products, and also by models. A detailed description of these *Lehrmittel* cannot here be attempted as the field is almost boundless, and reference must be made to one of the large catalogues[1] to gain a faint idea of the richness of these accessories to effective teaching. The manufacture of this instructional material has become an important industry in Germany.

All *elementary* schools have a collection of apparatus and supplies for the teaching of elementary physics and chemistry, and in many of these schools a special "physics room" is provided to which classes of the sixth, seventh, and eighth grades go to receive instruction in these branches.

A very large room or hall is fitted up in most schools for the work in drawing. The tables are provided with stands for the models, and good collections of models such as needed in modern courses

[1] *Schulwart Katalog: Lehrmittel.* Leipzig und Berlin: F. Volkmar.

in drawing are furnished. In some cities a small sum of money is allowed each drawing teacher to buy flowers and other natural objects that cannot be procured from the school garden. Fine and very large glass cases placed in these drawing-rooms hold and protect the drawing-models and the material. The instruction in drawing is in nearly all cases given by teachers who are specially trained for the work. Ample opportunity is, however, given the regular teachers to attend courses that introduce them to the requirements of modern drawing in weekly lessons that often extend throughout the year. These courses are here mentioned because the ability of teachers to sketch and illustrate rapidly stands in close relation to objective teaching.

The most important exponents of the fundamental idea of instruction through *Anschauung* are the numerous museums. While all of these have a strongly educational influence, there is one type of museum whose only purpose is instructional, and of this class probably the grandest example is the Deutsche Museum at Munich. Here the triumphs of human genius over nature and its forces are demonstrated by very extensive collections of originals and models covering nearly all departments of human endeavor; and here the inspection and observation of realities and processes that are difficult to understand from description or from books impresses one with the truth and the importance of the great principle "The origin and foundation of all knowledge is *Anschauung*. From this form all teaching has to proceed."

[*To be continued*]

BOOK REVIEWS

Peter Ramus and the Educational Reformation of the Sixteenth Century. By FRANK PIERREPONT GRAVES, PH.D. New York: Macmillan, 1912. Pp. xi+226. $1.25.

This monograph by Professor Graves is an interesting example of the recent tendency in writing the history of education to emphasize the development of educational practice. Peter Ramus (1515–1572) is treated as the great progressive leader at the University of Paris in the contest "between the conservative forces of scholasticism, ecclesiasticism, and the masters of the university colleges, on the one hand, and the progressive alliance of humanism, Protestantism, and the royal lecturers, on the other." The educational reforms of Ramus in France were similar to those of Melanchthon and Sturm in Germany, but before the appearance of the present treatise there has existed no extensive account of his work in English. The author's experience as a student and professor of the classical languages before specializing in education has made possible this account which is based almost entirely upon Latin sources.

The first half of the book is primarily biographical in character, but the events in the life of Ramus are so related to the general social development and the life of the university as to present a concrete picture and narrative of the whole movement in which he played a part. The story is well told and would be of interest to all students of the history of education.

The second half of the book is a more technical discussion of the educational reforms inaugurated by Ramus. It is of interest to the special student who is concerned with the detailed history of higher education, especially with changes in the curriculum and methods of instruction.

S. CHESTER PARKER

Great Educators of Three Centuries, Their Work and Its Influence on Modern Education. By FRANK PIERREPONT GRAVES, PH.D. New York: Macmillan, 1912. Pp. ix+289. $1.10.

In this book Professor Graves has reverted to the type of historical treatment of education represented by Quick's *Educational Reformers*, Munroe's *The Educational Ideal*, and Laurie's *Educational Opinion since the Renaissance.* The author recognizes in his preface that such books do not present the history of education, but justifies his work on the basis of its service to the more general reader.

In order to secure the interest that attaches to such a personal treatment of the history of education and justifies it, the account of each individual must be made sufficiently full to bring out his personality. In the cases where the author has done this the chapters are very interesting and hold the reader's attention in the same way as does the biographical part of the Peter Ramus reviewed above. The chapters on Rousseau, Pestalozzi, and part of the one on Froebel are especially good from this point of view. On the other hand, the interest of the general reader is likely to flag when abstract classifications and philosophical discussion are presented. This tends to be

the case in some of the earlier briefer chapters where there is much reference to "humanism," "humanistic-realism," "sense-realism," and "social-realism," and in some parts of the chapter on Herbart. These portions however are not frequent, and in general the book possesses the same charm that gave Quick's *Educational Reformers* such a long life.

There is a strong emphasis throughout on the influence exerted by each reformer on educational practice, and wherever possible the practical developments in America have been traced.

The educators treated are Milton, Bacon, Ratich, Comenius, Locke, Franke, Rousseau, Basedow, Pestalozzi, Herbart, Froebel, Lancaster and Bell, Mann and Spencer. A little over half of the book is devoted to the five chapters on Rousseau, Basedow, Pestalozzi, Herbart, and Froebel.

S. CHESTER PARKER

Berry's Writing Book and Primer. B. D. Berry & Co., 1912.

This writing-book is constructed on the same principles as the other Berry writing-books, with colored pictures illustrating rhymes or quotations having literary value. The content of this primer is the Edward Lear A B C rhymes. The writing is nearly one-half inch high and so is better adapted to beginners than the ordinary first book. If one uses copy-books this is the best one for beginners with which the reviewer is acquainted.

F. N. F.

UNIVERSITY OF CHICAGO

The Outlines of Educational Psychology. By WILLIAM H. PYLE. Boston: Warwick & York, 1911. Pp. x+254.

The book opens with a brief introductory chapter in which it is pointed out that sociology teaches the aim of education, biology and psychology teach the nature of the child, and psychology explains the essential nature of the educational processes. The kind of psychology in which the author is interested is functional, biological, and evolutionary psychology. He takes up accordingly as his first problem heredity and the inherited modes of adjustment which the child brings into the school. The individualistic instincts such as fear, anger, etc., are described and their pedagogical importance is briefly discussed. In like fashion the social instincts, environmental instincts (migration, collecting), the adaptive instincts (play and imitation) are treated at length. After instinct comes habit. The nature of habit, the training of habit, the problems of drill, and the moral value of habit are each treated in turn. Finally, there are three chapters on memory, attention, and fatigue. The book has in its appendices some charts for use in school inspection.

The book illustrates very strikingly the author's view of the intimate dependence of education on inheritance. One-half of the book is gone before the discussion of instincts is completed. The higher processes of thought and reasoning get no attention. That most vital and significant mode of social adjustment, language, is left out. The combative tendencies are dwelt upon, but the constructive adjustments which appear in the industrial arts are not explained. The sphere of intellectual activities which are commonly treated under the terms abstraction, generalization, and conception, in short the whole world of scientific reasoning, is as if it were not.

There can be no doubt that instinct is important in education; and in common with such books as those of Kirkpatrick, the present outlines give some insight into the productive studies of human behavior which have lately bridged over the gap between human and animal psychology. The teacher who is offered these studies as the major part of educational psychology, however, is likely to regard the author as one-sided and as out of touch with the school. Whatever else the school does, it teaches language, and this topic is not mentioned in Dr. Pyle's index. Nor are reading or number.

C. H. J.

A Manual of Shoemaking and Leather and Rubber Products. By WILLIAM H. DOOLEY. Boston: Little, Brown & Co., 1912. Pp. 279.

This book contains, first, a general account of the preparation of leather, second, an account of the parts of the shoe with which the manufacturer has to deal in constructing a shoe, also accounts of the anatomy of the human foot to which the shoe has to be fitted, of the organization of the large manufacturing concerns that turn out shoes, and finally of the history of footwear.

The volume was prepared for use in the Linn Industrial School, and represents the effort of that school to give to children who are being trained in one of the trades some general insight into the industry with which they are to be connected. Through this book they are to be trained in the methods of reading, and in the methods of securing information about their work. The skill that they cultivate in the trade class is thus to be supplemented by the intellectual power which they cultivate through the study of a manual relating to their trade.

The type of material which appears in this book is very suggestive for teachers in schools other than industrial schools. There can be no doubt at all that children of the fourth and fifth grades, and children of the upper grades of the elementary school are very much interested in the manufacturing processes by which common articles are produced. Children will read this practical description of manufacturing processes, when they find the ordinary literature which is supplied to them in reading-books very irksome. It is surprising that teachers do not see the importance of getting together material of this type, and putting it in form for children's reading.

It is doubtful whether a good deal of this manual in its present form would be useful in the lower grades. Some of the information is rather technical, and some of the chapters deal with the names of parts of objects in such detail that the chapter would not be useful as ordinary reading-matter. At the same time there are chapters, such as "The General History of Footwear," and the account of the way in which a shoe is made, which without much change would be of interest to all children.

The time will certainly come when teachers will prepare manuals similar to this with regard to the making of lead pencils, the making of various fabrics and ordinary pieces of furniture. The volume is therefore one which can be commended to the attention of teachers as an excellent illustration of writing in a field as yet unoccupied, but very important for the development of children's interests in the schools.

C. H. J.

BOOKS RECEIVED

AMERICAN BOOK CO., CHICAGO

Rabenort's Geography. North and South America. (Exclusive of the United States.) By WILLIAM RABENORT. Cloth. Illustrated. Pp. 230. $0.50.

Rabenort's Geography. Europe. By WILLIAM RABENORT. Cloth. Illustrated. Pp. 231. $0.50.

William's Choice Literature. Compiled and arranged by SHERMAN WILLIAMS. Cloth. Illustrated.

Book One. Pp. 144. $0.20.
Book Two. Pp. 160. $0.25.
Book Three. Pp. 192. $0.28.
Book Four. Pp. 256. 0.35.
Book Five. Pp. 320. $0.40.
Book Six. Pp. 400. $0.45.
Book Seven. Pp. 512. $0.50.

General Science. By BERTHA M. CLARK. Cloth. Illustrated. Pp. 363. $0.80.

Laboratory Manual in General Science. By BERTHA M. CLARK. Cloth. Illustrated. Pp. 96. $0.40.

Fifty Famous People. By JAMES BALDWIN. Cloth. Illustrated. Pp. 190. $0.35.

A First Latin Reader. By H. C. NUTTING. Cloth. Pp. 250. $0.60.

Pupil's Notebook and Study Outline in English History. By FRANCIS A. SMITH. Pp. 142. $0.25.

GINN & CO., CHICAGO

Old Time Hawaiians and Their Work. By MARY S. LAWRENCE. Cloth. Illustrated. Pp. 172. $0.60.

Heimatlos. By JOHANNA SPYRI. Translated by EMMA STELTER HOPKINS. Cloth.

Work and Play with Numbers. By GEORGE WENTWORTH and DAVID E. SMITH. Cloth. Illustrated. Pp. 144. $0.35.

HASTINGS, BATTLE CREEK, MICH.

Education. The Old and the New. Published by the Author, WILLIAM P. HASTINGS. Cloth. Illustrated. Pp. 299. $1.00.

D. C. HEATH & CO., CHICAGO

Health in Home and Town. By BERTHA MILLARD BROWN. Cloth. Illustrated. Pp. 312.

Grammar Grade Speller. By EDWIN S. RICHARDS. Cloth. Pp. 188.

HINDS, NOBLE & ELDRIDGE, NEW YORK

The Most Practical Theme Tablet. Devised by GEORGE MOREY MILLER. Per pad, $0.20.

HOUGHTON, MIFFLIN CO., BOSTON

Fifth Reader. By JAMES H. VAN SICKLE and WILHELMINA SEEGMILLER. Cloth. Illustrated. Pp. 278. $0.55.

THE MACMILLAN CO., NEW YORK

When We Were Wee. By MARTHA YOUNG. Cloth. Illustrated. Pp. 153. $0.40.

Stories Grandmother Told. By KATE FORREST OSWELL. Cloth. Illustrated. Pp. 246. $0.40.

The Teaching of Mathematics in Secondary Schools. By ARTHUR SCHULTZE. Cloth. Illustrated. Pp. 367. $1.25.

Teaching in School and College. By WILLIAM LYON PHELPS. Cloth. Pp. 186. $1.00.

Thought-Building in Composition. By ROBERT WILSON NEAL. Cloth. Pp. 170. $0.80.

THE MANUAL ARTS PRESS

Manual Arts for Vocational Ends. By FRED D. CRANSHAW. Cloth. Pp. 99. $0.85.

NEWARK, N.J., BOARD OF EDUCATION

Newark. In the Public Schools of Newark. Prepared by J. WILMER KENNEDY. Cloth. Illustrated. Pp. 213.

ORANGE JUDD CO., NEW YORK

School Agriculture. By MILO N. WOOD. Cloth. Illustrated. Pp. 340. $0.90.

SILVER, BURDETT & CO., BOSTON

A Practice Book in Arithmetic. By HARRIET E. SHARP. Paper.

STEWART & KIDD CO., CINCINNATI

Mind Cure and Other Essays. By PHILIP ZENNER. Cloth. Illustrated. $1.25.

CURRENT EDUCATIONAL LITERATURE IN THE PERIODICALS[1]

IRENE WARREN[2]
Librarian, School of Education, The University of Chicago

ABELSON, A. R. Tests for mental deficiency in childhood. Child (London) 3:1–17. (O. '02.)

A description of a number of tests given by the author and the conclusions drawn from them.

ADAMS, JOHN. An objective standard in education. School W. 14:367–71. (O. '12).

Presidential address before the section on education in the British Association for the Advancement of Science. Gives illustrations of the application of the scientific method to education.

Address of President Taft at the Fifteenth International Congress on Hygiene and Demography. Science 36:504–8. (18 O. '12.)

ANDREWS, E. BENJAMIN. The crusade for the country school. Educa. R. 44:385–96. (N. '12).

Announcement of a Montessori training course. McClure 50:82. (N. '12.)

ASHLEY, M. L. Aims, difficulties, and possibilities in teaching psychology to normal school students. Educa. Bi-mo. 7:1–8. (O. '12.)

BAGLEY, WILLIAM C. The professional training of high school teachers. West. J. of Educa. 5:347–45. (O. '12.)

BERRY, CHARLES SCOTT. A comparison of the Binet tests of 1908 and 1911. J. of Educa. Psychol. 3:444–51. (O. '12.)

A description of the two-test series and a report of the application of both series to forty-five children.

BOVERI, THEODOR. Anton Dohrn. Science 36:453–68. (11 O. '12.)

British schools spoiling the boy. Lit. D. 45:556. (5 O. '12.)

BROOKMAN, THIRMUTHIS. An appeal to school women. Educa. Bi-mo. 7:41–45. (O. '12.)

BURNHAM, WILLIAM H. Suggestions in elementary education. Am. Phys. Educa. R. 17:540–46. (O. '12.)

[1] Abbreviations.—Am. Phys. Educa. R., American Physical Educational Review; Atlan., Atlantic; Cent., Century; Educa., Education; Educa. Bi-mo., Educational Bi-monthly; Educa. R., Educational Review; Educa. Rec. (Lond.), Educational Record (London); El. School T., Elementary School Teacher; English J., English Journal; Geographical T., Geographical Teacher; Harp. W., Harper's Weekly; J. of Educa. Psychol., Journal of Educational Psychology; Lit. D., Literary Digest; Liv. Age, Living Age; Man. Train. M., Manual Training Magazine; Outl., Outlook; Pop. Sci. Mo., Popular Science Monthly; Psychol. Clinic, Psychological Clinic; School B., School Bulletin; School R., School Review; School W., School World; Sci. Am., Scientific American; Scrib. M., Scribner's Magazine; Voca. Educa., Vocational Education; West. J. of Educa., Western Journal of Education.

[2] Annotations by John F. Bobbitt and Frank N. Freeman.

CABOT, ARTHUR TRACY. Tuberculosis and the schools. Atlan. 110:704–8. (N. '12.)

CALL, ARTHUR DEERIN. The specialized or vocational versus the composite high school. Voca. Educa. 2:110–18. (N. '12.)

COLWELL, LEWIS W. Some observations concerning the teaching of primary arithmetic. Educa. Bi-mo. 7:19–25. (O. '12.)

COSSAR, J. The teaching of geography in Scottish primary schools. Geographical T. 6:261–66. (Je. '12.)

A general survey of subject-matter and method in accordance with the memorandum issued by the Scotch Education Department.

DAKIN, W. S. Vocational service for men in service. Voca. Educa. 2:89–109. (N. '12.)

DANIEL, Roland B. The secondary industrial school, Columbus, Georgia. Voca. Educa. 2:119–38. (N. '12.)

DAVIS, JESSE B. Vocational and moral guidance through English composition. English J. 1:457–65. (O. '12.)

The report of a successful trial of a plan to find material for high-school composition in the pupils' study of his vocational qualifications and responsibilities and the vocational opportunities of the world about him.

DYKE, PAUL VAN. College life. Scrib. M. 52:619–23. (N. '12.)

"A word to fathers who have not been to college but whose sons want to go." Minimizes the evils of college life and magnifies the virtues.

FISHER, WILLARD J. The drift in secondary education. Science 36:587–90. (1 N. '12.)

FISHPAW, CLARA BROOKS. The training of rural teachers. Educa. 33:79–83. (O. '12.)

FITZGERALD, ELLEN. Reading to write. Educa. Bi-mo. 7:36–40. (O. '12.)

FORDYCE, CHARLES. College ethics. Educa. 33:71–78. (O. '12.)

FRANK, MAUDE M. Dramatization of school classics. English J. 1:476–81. (O. '12.)

The author describes a satisfactory trial plan of securing interest in *Ivanhoe* and the *Odyssey* in the first year of high school by means of informal, rough-and-ready dramatization.

From red schoolhouse to Greek Parthenon. Lit. D. 45:786–87. (2 N. '12.)

GAYLER, G. W. Enrolment by grades in fourteen school systems of central Illinois. Psychol. Clinic 6:140–43. (O. '12.)

A brief statistical study.

GODDARD, HENRY H. The hygiene of the backward child. Am. Phys. Educa. R. 17:537–39. (O. '12.)

On the treatment of the child who is inherently feeble-minded.

GREGG, F. M. Social hygiene. Educa. 33:100–104. (O. '12.)

GULICK, LUTHER H. American School Hygiene Association. Am. Phys. Educa. R. 17:547–54. (O. '12.)

GULICK, LUTHER H. Report of the Committee on Heating and Ventilating. Discussion of the report.

HALE, H. O. The kinematograph in school. School W. 14:361–64. (O. '12.)

An account of the uses to which the kinematograph may be put in various subjects, such as geography, history, biology, etc.

HAYES, D. W. The training of teachers for rural schools. West. J. of Educa. 5:355–62. (O. '12.)

HINES, L. N. A study in retardation. Am. Phys. Educa. R. 17:534–36. (O. '12.)

A study to determine the share which physical defects have in causing retardation.

HOBBS, W. W., AND OTHERS. An inquiry into the causes of student delinquency. School R. 20:593–612. (N. '12.)

A questionnaire study on why high-school pupils fail to pass.

HODGMAN, T. MOREY. Functional changes in the college. Educa. R. 44: 240–48. (O. '12.)

A discussion of the changes in the small college necessary to make it fit present demands.

HUGHES, HELEN SARD. English literature and the college freshman. School R. 20:583–92. (N. '12.)

Reports the results of a minor statistical test of the knowledge of English literature acquired in the high school.

HURLBATT, ETHEL. The teaching of hygiene in the public schools. Am. Phys. Educa. R. 17:525–33. (O. '12.)

Advocates regular specific training in hygiene, by properly qualified teachers, and discusses other requirements.

HUTCHISON, JEAN. Textile industries and their practical application to education. Educa. Bi-mo. 7:64–68. (O. '12.)

Its only fault. Lit. D. 45:558. (5 O. '12.)

JASTROW, JOSEPH. The administrative peril in education. Pop. Sci. Mo. 81:495–515. (N. '12.)

A vigorous protest against "externalism" in university administration, and a plea for democracy in management.

JUDD, CHARLES H. Studies in principles of education. El. School T. 13:146–53. (N. '12.)

A discussion of the need not only of providing an opportunity for the child to solve the problems which he apprehends, but also of training him to discover problems he would not otherwise see.

KATSCHER, LEOPOLD. Educational gardening. Child (London) 3:18–24. (O. '12.)

An account of the important experiments in educational gardening with particular emphasis upon the last ten years.

KING, CHARLES A. Pre-vocational training. Educa. 33:105–8. (O. '12.)

LANSING, MARION FLORENCE. Seventy-five years of higher education for women. Outl. 102:360–65. (19 O. '12.)

LASELLE, MARY A. The special transfer class at the Newton Technical High School. Educa. 33:109–11. (O. '12.)

LYON, E. P. The migration of students. Science 36:533–43. (25 O. '12.)

A discussion of the principles which should govern the transfer of students from one institution to another.

MCANDREW, WILLIAM. One remedy for education. World's Work 25:72–79. (N. '12.)

MCCRACKEN, ELIZABETH. Going to school. 1. American children. Outl. 102:425–33. (26 O. '12.)

A gossipy discussion of the greater variety, pleasureableness, and normality of the schools of today as compared with those of a generation ago.

MACDOUGALL, ROBERT. The child's speech. 1. The impulse to speech. J. of Educa. Psychol. 3:423–29. (O. '12.)

A discussion of the hereditary and environmental factors which underlie the impulse to speech.

MCMANIS, JOHN T. The study of children in the normal school. Educa. Bi-mo. 7:69–73. (O. '12.)

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